

**ILLUMINATION OPTICAL SYSTEM, PROJECTION/EXPOSURE DEVICE,
MICRO DEVICE MANUFACTURING METHOD, ILLUMINATION DEVICE
MANUFACTURING METHOD, PROJECTION/EXPOSURE DEVICE
ADJUSTMENT METHOD, AND PROJECTION/EXPOSURE DEVICE
MANUFACTURING METHOD**

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Abstract of the Disclosure

An object of this invention is to reduce even slight irregularities in illumination that occur after assembly of an optical system. To this end, in an exemplary
10 illumination-optical system, a light source that emits extreme ultraviolet (EUV) light, a collimator, a fly's-eye mirror, and a condenser are positioned, in this stated order. A prescribed illumination area on the emission side of the condenser is irradiated with Köhler illumination. At least one unit mirror, among multiple unit mirrors of the fly's-eye mirror, is a correction mirror that has reflectivity irregularities. The reflectivity
15 irregularities correct a portion of, or all, the illumination irregularities in the illumination area.